PCT WORLD INTELLECTUAL I Internatic WO 9605038A1

INTERNATIONAL APPLICATION PUBLISHED UNDER THE PATENT COOPERATION TREATY (PCT)

(51) International Patent Classification 6 : B29B 9/00, C04B 35/64, A61F 2/28 — A1

(11) International Publication Number: WO 96/05038

(43) International Publication Date: 22 February 1996 (22.02.96)

(21) International Application Number: PCT/US95/10017

(22) International Filing Date: 8 August 1995 (08.08.95)

(30) Priority Data:
08/288,120 8 August 1994 (08.08.94) US

(71) Applicant: BOARD OF REGENTS, THE UNIVERSITY OF TEXAS SYSTEM [US/US]; 201 West 7th Street, Austin, TX 78701 (US).

(72) Inventors: BARLOW, Joel, W.; 7139 Valburn Drive, Austin, TX 78731 (US). LEE, Goonhee; 3357 Lake Austin Boulevard #C, Austin, TX 78703 (US). CRAWFORD, Richard, H.; 912 Lipan Trail, Austin, TX 78733 (US). BEAMAN, Joseph, J.; 700 Texas Avenue, Austin, TX 78705 (US). MARCUS, Harris, L.; 4102 Hyridge, Austin, TX 78759 (US). LAGOW, Richard, J.; 6204 Shadow Mountain Drive, Austin, TX 78731 (US).

(74) Agent: BARBER, William, G.; Arnold, White & Durkee, P.O. Box 4433, Houston, TX 77210 (US).

(81) Designated States: AM, AT, AU, BB, BG, BR, BY, CA, CH, CN, CZ, DE, DK, EE, ES, FI, GB, GE, HU, IS, JP, KE, KG, KP, KR, KZ, LK, LR, LT, LU, LV, MD, MG, MN, MW, MX, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, TJ, TM, TT, UA, UG, UZ, VN, European patent (AT, BE, CH, DE, DK, ES, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE), OAPI patent (BF, BJ, CF, CG, CI, CM, GA, GN, ML, MR, NE, SN, TD, TG), ARIPO patent (KE, MW, SD, SZ, UG).

Published

With international search report.

Before the expiration of the time limit for amending the claims and to be republished in the event of the receipt of amendments.

(54) Title: METHOD AND SYSTEM FOR FABRICATING ARTIFICIAL BONE IMPLANTS

(57) Abstract

A process for making bone implants from calcium phosphate powders is disclosed. This process involves selectively fusing layers of calcium powders that have been coated or mixed with polymer binders. The calcium powder mixture may be formed into layers and the polymer fused with a laser. Complex three-dimensional geometrical shapes can be automatically replicated or modified using this approach.